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SOIL CONSERVATION LITERATURE :-

SELECTED CURRENT REFERENCES

Compiled By The Library Staff Of The Soil Conservation Service
From Publications Received In The
United States Department of Agriculture Library, Washington, D.C.

JULY 1936

PERIODICAL ARTICLES

Aerial Photography

Birdseye, S.H. Aerial photography on tropical surveys. Military Engin. 28(159):161-165. illus. May-June 1936.

Discusses aerial photography as the only accurate method of map making in countries with tropical jungle growth and long rainy seasons. Gives detailed description of making surveys for reconnaissance survey for Guatemala-Honduras boundary, under auspices of the Special Neutral Boundary Tribunal, during 1932.

Shellaby, R.K. Bird maps for soil savers: The modern profession of photogrammetry permits surveying of vast areas from the air, simplifies the work of conservationists, and leaves ground crews to plot along 10 to 20 times slower. Christian Sci. Monitor Weekly Mag. Sec. May 27, 1936, pages 8-9. illus.

Describes aerial photography methods of map making from the air over Navajo, Tia and Rio Grande Valley soil conservation projects, with 10-lens camera used for large areas.

Weyher, T.A. Field developments in aerial mapping. Military Engin. 28(159): 191-195. illus. May-June 1936.

Gives details of execution and methods used in aerial mapping survey of an area comprising about 1,500 square miles of heavily forested and mountainous country in the Olympic Peninsula in Washington.

Dams

Faumann, Paul. The function and design of check dams: Discussing the form of the structures and their importance in soil erosion control. Civil Engin. 6(6):355-358. illus. June 1936.

Gives ten useful rules of a practical nature for the design of check dams.

Hardenbergh, W.A. Constructing procedure with small earth dams. Pub. Works 34(3): 25-26. March 1936.

Review of modern practice; spreading and compacting; preventing erosion of earth surfaces.

Jones, O.S. Deposition of worn-cut water beads. Outdoor Amer. n.s., 1(5): 4-9. March 1936.

(continued on page 2)

Dams (continued)

Jones, O.S. (continued)

Gives suggestions for recharging water beds and conserving seep water. Suggests simple diversion dam which would spread flood waters over areas of high porosity and absorb much of that water, thereby recharging shallow water gravels. These diversion dams should be so located as to entail no economic loss from water spread. Construction of dams on such scale would of necessity be up to private initiative, and benefits obtained would largely accrue to farm owners in following manner: 1. Recharge the source beds his wells are dependent upon. 2. Check erosion on his farm. 3. Impound storm runoff thereby doing his part in lessening flood hazard.

Dust Storms

Parkinson, G.R. Dust storms over the Great Plains: their causes and forecasting. Bul. Amer. Met. Soc. 17(5):127-135. maps. May 1936.

Presents results of studies as to sources of dust storms in the middle west and southwest. Explains precipitation deficiency over the western plains states as caused by Polar continental air masses taking a track farther east than usual for several years prior to May, 1935. Gives characteristic properties of air masses causing dust storms. States that in order to forecast dust storms it is necessary to determine what air mass will prevail over the route for the time for which the forecast is desired, the characteristic properties of the air mass involved, frontal movements, wind velocities, vertical temperature-gradient; previous precipitation in the location of the source region, and the time of day for which the forecast is desired.

The author is meteorologist, Transcontinental and Western Air, Inc., Kansas City.

Erosion Prevention and Control

Cooke, M.L. An engineer looks at rural America. Jour. Land and Pub. Util. Econ. 12(1):1-11. February 1936.

Discusses basic problems of rural life, especially soil erosion, as remediable through cooperative effort and intelligent leadership. Emphasis is placed upon rural electrification as an important factor in control and utilization of headwater streams as a means to soil conservation.

Drummond, W.L. Dust bowl; short grass country - where dry years and high winds speed the errant soil, and only Nature can bring relief to short-haired Dust Bowl farmers. Rev. of Reviews 93(6): 37-38. illus. June 1936.

Describes the Dust Bowl before and after the soil was weakened by overgrazing and overproduction, and discusses control projects.

Erosion Prevention and Control (continued)

Soil erosion in South Africa. Northwestern Miller 186(6): 503. May 20, 1936.

In a section called "News and Comment from the Old World", the editor says that "in a report published in the Commercial Intelligence Journal, of Ottawa, it is stated that the antierosion plans launched" in South Africa "in 1933 have yielded excellent results. One important method adopted is the construction of catchment basins for water. These have more than paid for themselves in tiding livestock over dry periods and serving as a source of water supply for small irrigation schemes, particularly in enabling small acreages of alfalfa to be grown as supplementary feed for livestock."

Fertilizers

McCool, M.M. Fertilizer value of a new nitrogenous material. Contrib. Boyce Thompson Inst. 8(1):13-24. illus. January-March 1936.

Gives results of test to determine rate of ammonification and nitrification in soils, effect on seed germination, early growth, and value for crop production in comparison with high and low grade animal tankage, of new material consisting of untreated calcium cyanamide and concentrated residue obtained after alcohol was distilled from fermented molasses.

Flood Control

Cooke, H.L. Dams are not enough. Amer. Forests 42(6):251-252, 286. illus. June 1936.

Emphasizes the importance of forest cover and forest litter, of soil-building leguminous crops and matted grass cover to hold water and control erosion.

Flood control. Omnibus flood control bill passed by the Senate and Mississippi river bill approved by the House. Engin. News Rec. 116(22): 293. May 23, 1936.

New provision is added to the flood control bill, placing the Soil Conservation Service of the Department of Agriculture in charge of waterflow retardation and soil erosion prevention on watersheds.

Parcell, T.T. Washington river flood control. Military Engin. 23(159):154-156. illus. May-June 1936.

Explains cause of Washington river floods, and gives details of flood control project organization and work. Describes design of Washington project.

Rebuilding the delta. Engin. News-Rec. 116(22): 832. June 18, 1936.

Editorial discusses the Overton flood control bill, which adopts and authorizes the Markham plan to develop "a more effective and workable system of flood bypasses west of the Mississippi delta."

Flood Control (continued)

Silcox, S.A. Forestry in flood prevention. Conservation
2(3):4. June 1936.

Discusses forest cover as an important issue in watershed areas for the prevention of floods.

Condensed from address before National Rivers and Harbors Congress.

To plan for control of floods, erosion, and water pollution. Amer.City 51(4):5. April 1936.

Describes set-up of the National Water Plan, to be submitted to President Roosevelt before December 1, 1936, by the National Resources Committee. Also lists the several Federal agencies concerned with water problems, i.e., control of floods, erosion and water pollution, uses of water for domestic purposes, irrigation and power, and drainage of waterlogged and overflowed lands.

Grasses

Cates, J.S. America goes to grass. Country Gent. 106(7): 21,34-35. illus. July 1936.

Discusses growth and development experiments with the 25 new winter annual legumes of the clover family brought in from the Near East and Russia by Westover and Enlow, with special reference to Persian clover which is rapidly becoming established in lower South agriculture. Also presents outline of experiments with Korean lespedeza (No.19604) to determine its value as a soil building legume in the corn belt. Mention is made of the work of the section of agronomy, Soil Conservation Service, in development of new strains of grasses suitable for erosion control in the western regions of the United States.

The statement is made that "the whole present-day conservation movement leans on forage-crop use. The plant breeder is the one technician who can provide the material for making soil coverage a success."

Garnert, W.B. Native grass behavior as affected by periodic clipping. Jour.Amer. Soc. Agron. 28(3):447-456. illus. June 1936.

Gives detailed description of a study of material supplied by a virgin grass clipping project carried on at the Oklahoma Agricultural Experiment Station during the past 6 years, and deals with a special study of 12 of the 90 plants in comparison with the idle roadside and a pastured area with regard to the following points: total clippings (5 years); comparative production (5th year); root weight (5th year); root volume (6th year); weight-volume factor; soil moisture (5 horizons, 6th year); soil organic matter (5 horizons, 5th year); soil pH (5 horizons, 6th year); sod slices mounted for study (3 horizons, 6th year); continuous controlled pastures; sod, unclipped and untreated.

Literature cited at close of the article.

Grasses (continued)

Hatch, Henry. Should we all "Go to grass?" Kansas Farmer 74(13):9. June 20, 1936.

Discusses crop conditions in Kansas with reference to pasture increase and soil conservation. The author refers to the low annual money return to the acre from "this fine bluestem grass of ours". He questions whether this transfer of so much land to grass "will not work us into an overbalance of grass acreage" and create a new problem in the effort to solve another.

Krieghbaum, Hillier. A lid for the dust bowl. Today 6(2): 14, 21. illus. May 2, 1936.

Discusses values of various grasses (buffalo grass, Aristida Pennata, wild alfalfa, western wheat grass, big and little bluestems and blue grama) in reclamation of dust bowl soils, with special reference to difficulties of seed collection and efforts of Soil Conservation Service workers to collect large amount of seeds for the season's plantings.

Grazing Land

Butler, Ovid. Western ranges are passing: Secretary Wallace, in transmitting report to Congress declares western grazing lands are becoming a great American desert, and recommends the transfer of the Federal Public Domain from the Department of the Interior to the Department of Agriculture. Amer. Forests 42(6): 254, 289-290. June 1936.

In support of the Secretary's recommendation the author states that "lines of remedial action discussed in detail include the reduction of stocking to the actual present grazing capacity, the establishment of sound systems of range management; adjustment of grazing to meet the public needs for watershed protection, soil conservation, wildlife and recreation; artificial revegetation of many areas; better animal husbandry; adjustment of economic grazing units; Federal and state programs of research and extension; solution of the chaotic tax delinquency problem; transfer of the Public Domain to the Department of Agriculture; public acquisition of approximately 125,000,000 acres of submarginal grazing lands."

Land Utilization

New projects being undertaken in various states. Land Policy Circ. May 1936; pages 4-5.

Reports plans for reconnaissance survey of eastern Arkansas (Region 3). For collection of data on drainage and backwater conditions and soil fertility, data to be used in land-use planning study by Arkansas agricultural experiment station, Bureau of chemistry and soils, Federal Land Bank of St. Louis and the Soil Conservation Service. Reports also land classification program to be projected July, 1936, in Minnesota (Region 2).

Nursery Practices

New developments in nursery practice and tree planting. Pa. Forests and Waters, Dept. of Serv. Letter Ser. 7 No. 12:2-3. Mar. 19, 1936.

Describes methods of machine seeding, root pruning, of growing seedlings without the use of shade, of the use of aluminum sulphate for controlling damping-off, and of pruning black locust seedlings while still in the seed bed. Explains the use of chaff in establishing seed spots. This method of seeding offers considerable promise for inter-planting and erosion control work. Briquette planting has been developed extensively in Norway and experiments conducted in this country would indicate that it has a very decided place in reforestation work. This method should be particularly adapted for use in erosion control work.

Note: Delivered before Allegheny Section Society of American Foresters, Harrisburg, Pa., February 28, 1936.

Run-off

Cathrall, S.G. Dynamite works with CCC camps to dispose of sulphurous water injurious to Pennsylvania farms. Ag-Ex News 5(1): 8-9. May 1936.

Describes method of blasting for ditch on Pennsylvania farm, for construction of waterway to control undesirable flow and spread of sulphurous water from coal mines and at the same time solve an outstanding erosion problem. The method of ditching with dynamite was proposed by workers of Soil Conservation Service and proved efficient in control of all excess runoff.

Fitzgerald, O.A. Fooling Jupiter Pluvius. West. Farm Life 38 (12):19. June 15, 1936.

Describes portable fire pump devised to produce artificial rains for runoff study. An outstanding result of the study was that kind and density of vegetation is more important in influencing runoff and erosion than is steepness of slope or intensity of rainfall.

Griffith, J.R. Runoff for culvert design in farming country. Highway Mag. V.27, p.115. May 1936.

Presents method for computing the runoff expectancy from a given watershed, i.e., the Burkli-Ziegler formula.

SCS Demonstration

SCS work tested. West. Farm Life 38(11):4. June 1, 1936.

An editorial calls attention to "the first important test of some of the wind and water erosion prevention practices being advocated and demonstrated by the Federal Soil Conservation Service." It is stated that watershed dams, contour farming, terracing and diversion ditches constructed in Powers and Baca counties, Colorado proved successful in control of runoff during and after a 24-hour precipitation. "The results are not only gratifying to the service but are encouraging to landowners who are planning to carry out similar soil retaining practices on their own ranches."



Soil Drifting Legislation

McNeal, T.A. State Supreme Court knocks out compulsory soil listing law. Kan. Farmer 74(12): 6. June 6, 1936.

States that the Kansas Supreme Court has declared the compulsory soil listing law unconstitutional. The author explains the law, the court decision, and that other laws may be unconstitutional for similar reasons.

Soils

Fergus, E.N. Shall crops be adapted to soils or soils to crops? Jour. Amer. Soc. Agron. 28(6): 443-446. June 1936.

Discusses the serious consequences of adapting poor-land crops to depleted soils unattended by liming, manuring, and fertilizing. Contains information concerning diseases of mineral malnutrition, in humans and animals, resulting from continuous subsistence upon food grown in impoverished soils.

Literature cited at close of article.

Stephenson, R.E. Humus, insects, and soil structure. Calif. Cultivator 83(12): 438. June 6, 1936.

Discusses the effect upon soil organisms when soil organic matter is depleted, and humus renewal as cure for depleted soils.

Stephenson, R.E. Soil research as a farm help. Calif. Cultivator 83(12):429, 453. June 6, 1936.

Emphasis is laid upon the duty of the soil research investigator in obtaining knowledge of farm problems as they arise, and to impart information that can be put to immediate use, and of the man on the farm to cooperate with application of known facts concerning soil problems.

Tulin, A.F. Rol' organicheskogo veshchestva v povyshenii plodordiiia krasnozemov. Sovetsk. Subtrop.(Moskva) 1936(1): 9-15. January 1936.

English summary.

The role of organic matter in increasing the fertility of red soils.

Visual Methods

When the movies come to town; forestry and soil conservation methods are clear in Louisiana. Ext. Serv. Rev. 7(5):75. illus. May 1936.

Tells of soil-improvement films shown in rural districts in Louisiana. The films are obtained from the United States Department of Agriculture, and are designed to emphasize and strengthen the practices recommended by extension agents.

Water Conservation

Lory, C.A. Colorado water puzzle still unsolved. Irrigation has been state's paramount problem since pioneer days. West (continued on page 8)



Water Conservation(continued)

Lory, C.A. (continued)

Farm Life 38(12): 5, 25. June 15, 1936.

Explains urgent need for water conservation in the state of Colorado, and suggests possible projects for slope surveys, storage reservoirs and trans-mountain diversion developments.

The author is President, Colorado State College.

Weed Eradication

Buckhardt, H.L. Effectiveness of furfural petroleum combinations in eradicating certain noxious weeds. Jour. Amer. Soc. Agron. 28(6): 437-442. illus. June 1936.

Presents results of study to test several furfural-petroleum combinations to determine the effectiveness of the various materials in killing dandelion, broad-leaved plantain, buckthorn, quack grass and field bindweed; the most effective rate of application; influence of climatic conditions and time of day on the effectiveness of application; and, the rapidity of kill resulting from the application of different chemicals.

Literature cited at close of article.

Wildlife management

Steen, E.B. The farm woodlot as a bird refuge; returns through insect control will repay many times any expense and labor-
other benefits gained. Outdoor Ind. 5(2):2,25. illus.
March 1936.

Discusses value of birds in farm woodlots, with suggestions for feeding and cover to encourage those species which control injurious insects and spread the seeds of fleshy fruits and nuts and coniferous trees.

RECENT LIBRARY ACCESSIONSBooks and Pamphlets

Braun-Blanquet, Josias, ..

Plant sociology; the study of plant communities, authorized English translation of Pflanzensoziologie, by Dr. J. Braun-Blanquet... translated, revised and edited by George D. Fuller... and Henry S. Conard... 1st ed. New York and London, McGraw-Hill book company, inc., 1952.

xviii, 439 p. incl. front., illus., diagrs. 23 1/2cm. (Half-title: McGraw-Hill publications in the agricultural and botanical sciences, E.W. Sinnott, consulting editor)

Bibliography: p.379-405.



Braun-Blanquet, Josias.

Vocabulary of plant sociology, by
J. Braun-Blanquet and J. Pavillard, translated by F.R. Bhar-
ucha... Cambridge [Eng., Author] 1930.
23 p.

Conference on water conservation. Report on progress...
Conference... Los Angeles, California, March 13-14, 1935.
102p. [Los Angeles] 1935

A report of the Committee on conservation of water, Irriga-
tion division, American society of civil engineers.

Partial contents: Resolutions adopted by Conference on
water conservation, p.2; Economic limits of conservation
of flood water by spreading, by K.Q. Volk, pp.42-44; Runoff
from small experimental plots, by F.B. Laverly, pp.45-63;
Measurement of debris transported from burned areas, by
C.W. Sopp, pp.63-73; The physical crisis of land use, by
W.C. Lowdermilk, pp.73-77; Safeguards on denuded watersheds,
by W.V. Mendenhall, pp.82-87; Runoff and erosion experiments
in mountain areas, by C.J. Kraebel, pp.87-95; Erosion and run-
off experiments from cultivated areas, by L.A. Jones, pp.95-101.

The Georgia ag engineer 1936. 52 p. Athens, 1936. This pub-
lication, issued annually by the Georgia student branch,
American society of agricultural engineers, contains several
articles on soil conservation.

Partial contents: The need of soil conservation, by H.T.
Chapman, pp.22-23; Impressions of ASAE annual meeting, by
W.B. Jones, pp.24-27; A summer's experience with the Soil
Conservation Service by Reuben Garrard, pp.39-41.

King, Horace Williams, 1871

Handbook of hydraulics for the solution of hydraulic pro-
blems, by Horace Williams King... 2d ed. New York [etc.] Mc-
Graw-Hill book company, inc. 1929.
523 p. incl. illus.

Le Conte, Joseph Nisbet

Hydraulics, by Joseph N. Le Conte... 1st ed. New York [etc.]
McGraw-Hill book company, inc., 1926.
348 p. diags.

Marks, Lionel Simon

Mechanical engineers' handbook, prepared by a staff of spec-
ialists, Lionel S. Marks, editor-in-chief... 3d ed., total issue
103,500. New York [etc.] McGraw-Hill book company, inc., 1930.
xix, 2264 p. incl. illus.

"Index to major topics" and "Important reference tables" on
lining-papers.

Nebraska. State board of agriculture. Annual report...for the year 1935. 725p. [Lincoln 1936]

Reports of allied organizations are also contained in this volume. Partial contents are as follows:

Nebraska association of farm managers, 26th annual meeting. The federal shelterbelt project, by H.D.Cochran, pp.83-89. Nebraska crop growers association, 26th annual report. Eulogy to grass, by J.J.Ingalls, p.121; The most profitable use of land as shown by Nebraska farm records, by A.G.George, pp.124-132; Nebraska land utilization studies, by Arthur Anderson, pp.133-147; Making the most of rainfall through soil and crop management, by J.C. Russell, pp.199-206. Nebraska state horticultural society. Proceedings. Sixty-fifth annual report. Practical methods of moisture conservation on orchard lands, by I.D.Wood, pp. 527-534.

Ohio state horticultural society.

Proceedings of the sixty-ninth annual meeting... Ohio state university, Columbus, Ohio, Farmers' week, January 27-February 1, 1936. 223 p. illus. [Columbus 1926]

Partial contents: Moisture relations in the orchard, by F.S.Howlett, pp.76-81; Recent viewpoints on orchard fertilizers and soil management practices, by J.H. Gourlet, pp.81-87.

Pennsylvania state horticultural association. Proceedings, seventy-seventh annual meeting held in Harrisburg, Pa., January 20-21, 1936. 95p.

State College, Pa., March 1936.

Issued as v.XIII, no.1 of the Pennsylvania state horticultural association news.

Partial contents: Observations on orchard soil fertility practices, by M.V.Bailey, pp.20-30.

U.S. National resources committee.

Regional planning... Washington, U.S.Govt. print.off., 1936.

Part I.- Pacific northwest. May 1936.

STATE PUBLICATIONS

Cornell, F.D. Jr.

A social and economic survey of the Spencer soil-conservation area, by F.D. Cornell, Jr... Morgantown, April 1936.

36 p. illus.tables. (West Virginia. Agricultural experiment station. Bulletin 269)

Ohio agricultural experiment station. Fifty-fourth annual report...for the year ended June 30, 1935. 153p. illus. Wooster, 1936.

Partial contents: More and better legumes needed for economic production and soil conservation in Ohio, p.17; Continuous cropping versus rotation, p.17; Erosion losses of soil from soil fertility plots, p.21; Studies relating to an agricultural land use program in Ohio, p.95; Non-silage ration efficient, p.101.

Sturgis, M. B.

...Changes in the oxidation-reduction equilibrium in soils as related to the physical properties of the soil and the growth of rice, by M.B. Sturgis. [Baton Rouge] January 1936.

37 p. tables. (Louisiana Agricultural experiment station, Bulletin 271)

"Literature cited:" pp.33-36.

U.S. GOVERNMENT PUBLICATIONS

U.S. Congress. Senate. Committee on commerce.
Subcommittee.

Flood control in the lower Mississippi valley. Hearings... on S.3551, a bill to amend the act entitled "An act for the control of floods on the Mississippi river and its tributaries and for other purposes", approved May 15, 1928, January 27, 28, 29 and 30, 1936... Washington, U.S. Govt. print. off., 1936.
cover-title, 3 p.l., 267p.

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